WHAT IS CLAIMED IS:

1. A method of determining the performance of a microprocessor having a circuit emulation mode and a normal operating mode, wherein the performance of a program having a plurality of instructions is assessed, comprising the steps of:

5   triggering the microprocessor into the circuit emulation mode;

resetting an instruction counter and a cycle counter to zero;

triggering the microprocessor into the normal operating mode and executing the program;

initializing the counting by the instruction counter such that the instruction

10   counter increments by one when an instruction is executed, wherein the microprocessor is triggered into the circuit emulation mode when the instruction counter reaches an upper value, the value inside the instruction counter and the cycle counter is read to evaluate execution performance and then the microprocessor is triggered into the circuit emulation mode again;

15   initializing the counting by the cycle counter such that the cycle counter increments by one when a timing pulse traverses a cycle, wherein the microprocessor is triggered into the circuit emulation mode when the cycle counter reaches an upper value, the value inside the instruction counter and the cycle counter is read to evaluate execution performance and then the microprocessor is triggered into the circuit

20   emulation mode again;

triggering the microprocessor into the circuit emulation mode when the program is executed to a definite point;

reading out the value inside the instruction counter and the cycle counter; and

evaluating microprocessor performance.

2. The method of determining microprocessor performance of claim 1, wherein the method further includes the following steps:

triggering the microprocessor into the circuit emulation mode on complete execution of the program;

5   reading out the value inside the instruction counter and the cycle counter; and

evaluating microprocessor performance.

3. The method of determining microprocessor performance of claim 2, wherein the method further includes the following steps:

setting up an assessment point at an instruction where execution speed is

10   required;

triggering the microprocessor into the circuit emulation mode when the assessment point is encountered during instruction execution;

reading out the value inside the instruction counter and the cycle counter; and

evaluating microprocessor performance.

15   4. The method of determining microprocessor performance of claim 3, wherein the method further includes the following steps:

setting up an assessment point at the start and at the end of a series of instructions where execution speed is required;

triggering the microprocessor into the circuit emulation mode when the start

20   assessment point is encountered during instruction execution;

reading out the value inside the instruction counter and the cycle counter;

triggering the microprocessor into the circuit emulation mode;

resetting the instruction counter and the cycle counter to zero;

triggering the microprocessor into the normal operating mode and executing the program;

initializing the counting by the instruction counter such that the instruction counter increments by one when an instruction is executed;

5   initializing the counting by the instruction counter such that the cycle counter increments by one when a timing pulse is traversed;

triggering the microprocessor into the circuit emulation mode when the ending assessment point is encountered;

reading out the value in the instruction counter and the cycle counter; and

10   evaluating microprocessor performance.

5. The method of determining microprocessor performance of claim 4, wherein the evaluation of microprocessor performance includes:

dividing the value inside cycle counter by the value inside the instruction counter

15   6. A device for determining the performance of a microprocessor execution, comprising:

a microprocessor capable of operating in a circuit emulation mode and a normal operating mode,

an instruction counter for counting up by one whenever an instruction is

20   executed, and when the instruction counter counts to an upper limit, the microprocessor is triggered into the circuit emulation mode, the values within the instruction counter and the cycle counter are read out; and

a cycle counter for counting up by one whenever one cycle of timing pulse is traversed, and when the cycle counter counts to an upper limit, the microprocessor is

triggered into the circuit emulation mode, the values within the instruction counter and the cycle counter are read out, wherein microprocessor performance is evaluated by dividing the value inside the cycle counter by the value inside the instruction counter.

7. A method of determining the performance of a microprocessor having a circuit emulation mode and a normal operating mode, wherein the performance of a program having a plurality of instructions is assessed, comprising the steps of:

triggering the microprocessor into the circuit emulation mode;

resetting an instruction counter and a cycle counter to zero;

triggering the microprocessor into the normal operating mode and executing the program;

initializing the counting by either the instruction counter such that the instruction counter increments by one when an instruction is executed, or by the cycle counter such that the cycle counter increments by one when a timing pulse traverses a cycle, wherein the microprocessor is triggered into the circuit emulation mode when the instruction counter reaches an upper value if the instruction counter is initialized, wherein the microprocessor is triggered into the circuit emulation mode when the cycle counter reaches an upper value if the cycle counter is initialized;

reading the value inside the instruction counter and the cycle counter to evaluate execution performance and then the microprocessor is triggered into the circuit emulation mode again,

triggering the microprocessor into the circuit emulation mode when the program is executed to a definite point;

reading out the value inside the instruction counter and the cycle counter; and

evaluating microprocessor performance.

8. The method of determining microprocessor performance of claim 7, wherein the method further includes the following steps:

triggering the microprocessor into the circuit emulation mode on complete execution of the program;

5   reading out the value inside the instruction counter and the cycle counter; and

evaluating microprocessor performance.

9. The method of determining microprocessor performance of claim 8, wherein the method further includes the following steps:

setting up an assessment point at an instruction where execution speed is

10   required;

triggering the microprocessor into the circuit emulation mode when the assessment point is encountered during instruction execution;

reading out the value inside the instruction counter and the cycle counter; and

evaluating microprocessor performance.

15   10. The method of determining microprocessor performance of claim 9, wherein the method further includes the following steps:

setting up an assessment point at the start and at the end of a series of instructions where execution speed is required;

triggering the microprocessor into the circuit emulation mode when the start

20   assessment point is encountered during instruction execution;

reading out the value inside the instruction counter and the cycle counter;

triggering the microprocessor into the circuit emulation mode;

resetting the instruction counter and the cycle counter to zero;

triggering the microprocessor into the normal operating mode and executing the program;

initializing the counting by the instruction counter such that the instruction counter increments by one when an instruction is executed;

5   initializing the counting by the instruction counter such that the cycle counter increments by one when a timing pulse is traversed;

triggering the microprocessor into the circuit emulation mode when the ending assessment point is encountered;

reading out the value in the instruction counter and the cycle counter; and

10   evaluating microprocessor performance.

11. The method of determining microprocessor performance of claim 10, wherein the evaluation of microprocessor performance includes:

dividing the value inside cycle counter by the value inside the instruction counter.